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UNITHERM Food Systems, Inc.

Cooking Trial Data

Date: 7/3		Supplied By: Bob Wood		Remarks	
Test #	Belt Speed	Cook Time	Product: Turkey Breast		Internal Temp. F.
			Temperatures C.	Yield	
			Zone 1	Zone 2	
#1	35.0	8.0	600°	650°	44°
#2	46.	6.0	600	650	44°
#3	BAVARIAN				
#4	37.5	3 Min.	600	650	
#5					
#6					

NETTED PRODUCTS 5 MOC @ 302.24
TOO DARK
45" liquid smoke

NOTES

#1
#2
#3
#4
#5
#6

U-04193

PTO-004157

UNITHERM Food Systems, Inc.										Date: 7/3
Cooking Trial Data				Product: CURE 81 HAM			Supplied By:			
Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks	
			Zone 1	Zone 2						
#1	70	45 MIN	600	650				44	30% 24 P	
#2	90	3 MIN	600	650				44	30% 24 P	
#3										
#4										
#5										
#6										
NOTES										
#1										
#2										
#3										
#4										
#5										
#6										

U-04194

PTO-004158

Unitherm

10-14-97

* Bunk should be coated before removing nets
to ease their removal.

* Cur is built

- Zip red material

- Infra Red red in winter

- Auto loader complete end of this week

* Control panel coming in registered on Monday

* Weather top will be necessary in the 1st
week of November

* Full operation not planned until 1st week in
December

*** Red Arrow or Unitherm wire will build
Overnight tanks ***

* Bag removal won't be complete until early next week

* 30 minutes to project

- Welds?

- Juice collecting

- Cost of cutting blades

- Tank washer for bag splitter will accumulate protein
↳ plumb water to bag washer

- Who is building table

7 layers of 5' x 10' x 1" sheet

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U-06962

PTO-004159

* After HMT they sent ship past us

8243 → 7002
 Enter Acc 46.00
 5 change to 120.0
 Liquid Smoke 42 Hz
 Start 10:46.23
 Stop 10:49.15
 10:49.50
 10:53.35

Belt Speed Over

10:57.44 Start
 10:58.13 1st
 10:58.42 2nd

21 min
 8 1/2 min

Both tests
 net buried in
 same places

11:02.50
 ↳ To end
 of over
 11:04.19

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 U-06963

8243 → 7102 60 Hz 11:05.50
 ↳ To fast far through 2nd hole
 60 1/2 11:06.10
 ↳ fast through 4th hole
 11:06.30
 11:07.40

11:13.52
 Liquid Smoke 42 Hz 11:06.50
 Belt Speed Over 48 Hz 11:11.50
 11:18.30

3370 240
 11:16.50 5th hole
 bit. very noisy
 / Net run to change to 25 Hz
 + speed up over / 1st hole
 (1st hole)
 11:18.30
 11:19.30
 11:20.30
 11:21.30
 11:22.30

8243 - 7002

Weight 9.38
9.26

11

10:33.4

40 Hz
Fast

11

25075 strip

Smoke

11:36.4

50 Hz

11:39.11

Wt at 10:33.4
Smoke 10:33.4

Over

11:39.11

55 Hz

11:45.50

Smoke 7:00

5600 65 12

Not burned

Weight 1107
5.930
2.895

8243 - 7002

10.445
10.275 after strip

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U-06964

PTO-004161

Weight	Time	Rate	Area
9.735	10.40.30	1.42.30	1.045.15
10.195	10.40.00	1.04.30	1.04.30
10.575			
10.520			
10.125			
10.015			
10.740			
10.69			

After Cook

2.670 97.4	9.675	K-2000 Flow	1 2
2.590 97.5	9.940		= 4
3.670 96.4	10.190		Low

97.6	10.270
97.3	9.855
97.8	10.015
97.6	10.120

Top Row

96.9 10.355 Surface Temp 72°F

0268
7785

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U-06965

PTO-004162

80602
E.46 0811

9.565
9.905

12:55:20

12:56:15

12:58:00

9.34
9.640

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U-06966

PTO-004163

Ovens

- Belt wash to be set at end of ovens.
- 7' extension on oven track to go through walls

Bag splitter

- Condensed Barrel fits under table.
- Extend 1.5' to go through wall.
 - legs set back 1' to accomodate for I. R.
- ~~Bag~~ Being longer. By 1'
- Pan under knife to catch Purge
- Check on how easy or hard the Bags come off.

Liquid Smoke applicator

- Red Arrow. suggested charges.
- 2 overnight storage tanks.

	Net/no		Skin/skinless
7001	Net	Mess	Skin on
7102	Net	Hick	Skin on
8246-32	No Net	MIS	Skinless
8246-02	No Net	Hick	Skinless
8243	With net	Mess	Skin on
8244-02	With net	Hick	Skin on
8247	No net	Mess	No skin
8246	No net		No skinless
7001	No net	Mess	Skinless

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U-06967

PTO-004164

F. D. Dryden

Hormel Foods Research Report

Attention: W. Thielen - CO L. Huston - CO

Project Name: CURE-81 Hams processed at Unitherm

Copy List:M. Benson - R&D
D. Ruzek - R&D
G. Paxton - COG. Ray - CO
R. Slavik - CO
J. Swedberg - CO

C. Cornell - CO

Written By: S. Hoevet - 5822 J. Ulrich - 5810

Objective:

Evaluate CURE-81® hams further processed at Unitherm

Summary:

A cutting was held at R&D on October 21, 1997. Those attending were F. Dryden, W. Thielen, D. Ruzek, L. Huston, G. Paxton, C. Cornell, G. Ray, J. Swedberg, R. Slavik and J. Ulrich.

Product shown:

CURE-81® control

CURE-81® hour smoke only

Test #1: No preheat, 1.5 min. liquid smoke with RA24 at 25%, 3 min. cook

Test #2: 50 sec. preheat, 1.5 min. liquid smoke with RA24 at 25%, 3 min. cook

Test #3: 30 sec. preheat, 1.5 min. liquid smoke with RA24 at 25%, 3 min. cook

Test #4: 30 sec. preheat, 1.5 min. liquid smoke with RA24 at 30%, 3 min. cook

Test #3 was selected as having the best color. Color tone and consistency were excellent. Negatives included a thicker rind and a bitter taste to the rind.

Recommendation:

1. Drop the smoke concentration to 15% or 20% to eliminate bitter taste
2. If color is comparable, eliminate the preheat to reduce the rind
3. For maximum shelf life:
 - a. process from cold
 - b. connect oven to chill tunnel to reduce surface temperature
 - c. package immediately

Jennie-O is buying a Unitherm unit which may be available for further testing. Steve Hoevet suggests additional testing be done at Unitherm with a large quantity of hams to test out the above recommendations.

All product from Test #3 was put into the shelf life cooler.

SMOKE CYCLE

TIME	DRY BULB	WET BULB
:45	140	120
:60	150	125
:90	150	130
:90	160	140
:60	170	150
:-	170	170

Wood Smoke

Steam Cook to IT 148° - 150°F

pjh (14205)

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U-06861

PTO-004166

W/NETS:

UNITHERM Food Systems, Inc.									
Cooking Trial Data									
T t #	Belt Speed	Cook Time	Product: <u>BARKEYS</u>		Supplied By: <u>EMULE-O</u>	Internal Temp. F.	Yield	Remarks	
			Temperatures C.						
			Zone 1	Zone 2					
#1	slow	45.00	600	650				SMOKE SELECT 24P 30% T.A. GRILL: 40 SEC. TIGHT NET / SPRAYS	
#2	38.00		525	600				24P @ 30% GRILL 45 SEC. TIGHT NET LIGHT SPRAY	
#3	38.00		525	600					
#4	3501		475	550				AUTOMATIC SMOKE APPLICATOR 30% 24P / IR GRILL FAST 35.00	
#5									
#6									

NOTES

#1 DID NOT WORK - REVERSED MARKS TRY LOWER TEMP LOWER IR WELL

#2 BETTER - STILL NOT THERE TRY LIGHTER SMOKE SPRAY

#3 SAME

#4 PROGRESS! TRY SAME TANG

PTO-004167

#5

#6

